sensorswitch

EXTENDED RANGE SENSOR - CEILING MOUNT, LINE VOLTAGE, PIR/MICROPHONICS™ (PDT)

TYPICAL APPLICATIONS

- Restrooms with Stalls
- Classrooms (Multiple Sensors)
- Storage Rooms with Shelving
- Concrete/Drywall Ceilings

FEATURES

- Patented Dual Technology with PIR / Microphonics™ Detection
- Self-Contained Relay, no Power Pack needed
- Time Delay: 30 sec. to 20 minutes
- No Minimum Load Requirements
- Push-Button Programmable
- Green LED Activity Indicator
- 100 Hr. Lamp Burn-in Timer Mode

DAYLIGHTING OPTIONS

- On/Off Photocell (-P)
- Auto Dimming Cntl. Photocell (-ADC)

SPECIFICATIONS

- Size: Circular, 4.55" Dia., 1.55" Deep (11.56 cm Dia., 3.94 cm Deep)
- Sensor Weight: 6 Ounces
- Sensor Color: White
- Mounting: Round Fixture Box or Single Gang Handy Box
- Relative Humidity: 20 to 90% non-condensing
- Operating Temp: 14º to 160º F (-10° to 71° C)
- Storage Temp: -14º to 160º F (-26° to 71° C)
- Load Rating (1 Phase Only):
  120 VAC @ 800 W
  277 VAC @ 1200 W
  347 VAC @ 1500 W
- 1/4 HP Motor Load
- Frequency: 50/60 Hz (Timers are 1.2 times for 50 Hz)
- UL, CUL, and Title 24 Compliant
- 5 Year Warranty
- Made in U.S.A.

LOW TEMP/HI HUMIDITY(-LT)

- Conformally coated Circuit Board is corrosion resistant from moisture
- Operates down to -4º F (-20° C)

CMR-PDT-10 Series

w/ Enhanced Daylighting Control Options!

Classrooms and larger spaces are conveniently controlled by the *CMR-PDT-10* Series Extended Range occupancy sensor. Even when classrooms are filled with shelving, hanging projects, or lab benches; the *CMR-PDT-10* provides total coverage! When mounted at 9 feet this sensor provides line of sight PIR detection up to 28 feet in a circular pattern and combines overlapping Microphonics™ for detection around obstructions. These attractive ceiling mount sensors are perfect for large restrooms and are an ideal solution for retrofitting classrooms with concrete ceilings. Additionally, the *CMR-PDT-10 Series* is line powered, therefore it requires no external Power Packs.

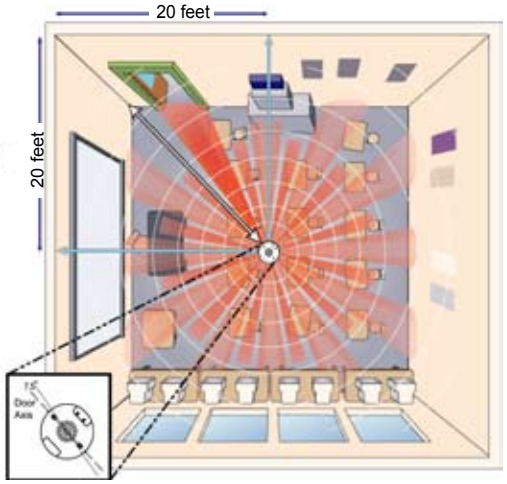
SENSOR OPERATIONS

Sensors with Passive Dual Technology (PDT) first "See" motion using Passive Infrared (PIR) and then engage Microphonics™ to "Hear" sounds that indicate continued occupancy. This patented technology uses Automatic Gain Control (AGC) to dynamically self adapt a sensor to its environment by filtering out constant background noise and detecting only noises typical of human activity. When occupancy is detected, a self-contained relay switches the lighting "On". The sensor is line powered and can switch a large range of line voltages. An internal timer, factory set at 10 minutes, keeps the lights "On" during brief periods of no activity. This timer is selectable at 2.5 minute increments from 30 seconds to 20 minutes, and is reset every time occupancy is re-detected.

Classroom Application

- Locate sensor to detect door threshold
- Dual Technology covers up to 40' x 40'

Location Guide	
Ceiling Height	Dist. In and Over from door
8 Ft. 9 Ft. 10 Ft.	17 Ft. 20 Ft. 22 Ft.



DAYLIGHTING CONTROL OPTIONS

For spaces with abundant natural light from windows or skylights, this series offers an On/Off Photocell (-P) option and an Automatic Dimming Control (-ADC) Photocell option. The -P option is ideal for public areas like vestibules, corridors, or restrooms; while the -ADC option is perfect for classrooms and private offices. As the daylight levels change in the room, both options insure that an adequate light level is maintained according to a programmable set-point value. The -P option provides two modes of operation; one simply inhibits the lights from turning on, while the other has full On/Off control of the lights. The -ADC option allows the sensor to control a dimmable ballast. It also provides a secondary dim time-out that enables the lights to go to a dim setting after one time-out and then turn fully off after a second time-out.

Model Numbering System: CMR-PDT-10-[DAYLIGHTING CONTROL]-[VOLTAGE]-[TEMP/HUMIDITY]

MODEL #	DAYLIGHTING CONTROL*	VOLTAGE	TEMP/HUMIDITY
CMR-PDT-10	Blank = None -P = On/Off Photocell -ADC = Auto. Dimming Cntl. Photocell *for both options use -P-ADC	Blank = 120-277 VAC -3 = 347 VAC	Blank = 14º to 160º F LT= -4º to 160º F

TYPICAL WIRING DIAGRAM (DO NOT WIRE HOT)

The sensor uses Sensor Switch's patented "either/or wiring"; Black to Hot and Black to Load. The White wire connects to neutral. Black wires are replaced with Red wires for 347 VAC. The -ADC option adds two low voltage wires for connection to a 0-10 VDC dimmable ballast.

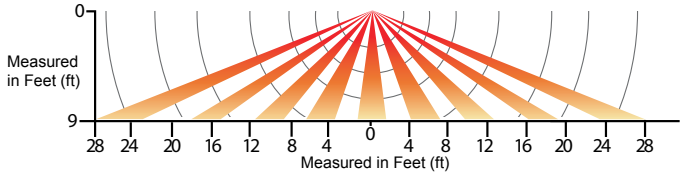
INITIAL POWER UP

When power is applied to the sensor, the relay is designed to be in a latched closed position, and the lights should come on. After a 1-3 minute warm-up period, the sensor becomes functional and begins to "time out". ***If the Lights Do Not Immediately Turn On (Initial Installation Only)*** the latching relay is in the open position. When the 1-3 minute warm-up is over the sensor will correct itself and close the relay.

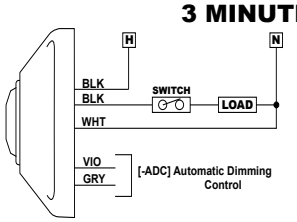
FIELD OF VIEW

The *CMR-PDT-10* dome lens provides a maximum PIR viewing angle of 67º in a complete 360º conical pattern. In Classrooms, locate sensor and align mounting screws as shown to detect right at door threshold, without viewing outside the entrance. Standard round fixture boxes will provide the proper angle for maximum viewing towards the door in the corner of the room. The Microphonics™ provides overlapping coverage to the PIR ensuring excellent performance. For long narrow or smaller rooms, locate sensor along entrance wall ensuring detection at door threshold, without viewing out door. Avoid locating the sensor near HVAC air diffusers because the "noise" generated from air flow will decrease the sensitivity of the Microphonic™ sensor.

Note: Heat producing sources controlled by the sensor must not be in the view pattern of the sensor. Symptom: Sensor cycles or appears to continually stay "On". Solution: Move sensor or mask lens segments that view the source.

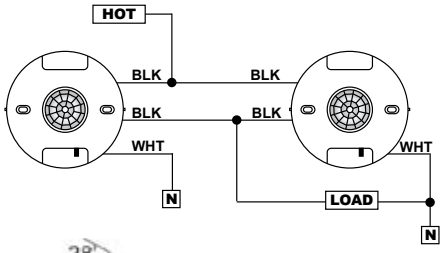


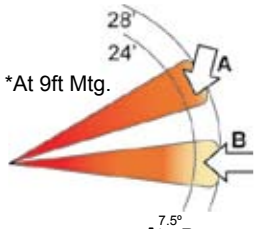
3 MINUTE WARM-UP



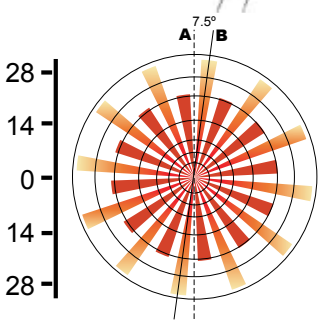
SENSORS IN PARALLEL

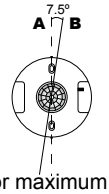
For multiple sensor applications, simply wire sensors in parallel, however the maximum load ratings stay the same. Do not wire sensors with -P or -ADC option in parallel.





A: When walking across beam, detection will occur at approximately 28 feet.
B: When walking into beam, detection will occur at approximately 24 feet.



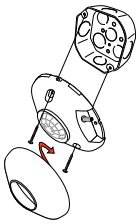


Note: For maximum distance rotate the sensor clockwise so that the screw axis(A) is positioned 7.5° off the entrance axis(B).

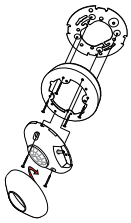
INSTALLATION

The ceiling sensor enclosure accommodates mounting to a single gang "Mud Ring" at a 3.28" spacing, up to a Round Fixture Box spacing of 3.5". Refer to "Field of View" section to determine orientation of box for maximum coverage. Note that most fixture boxes orientate the sensor 45º differently than a single gang handy box or mud ring on a 1900 box.

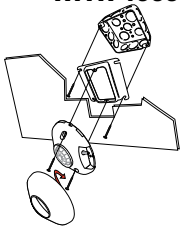
ROUND FIXTURE BOX



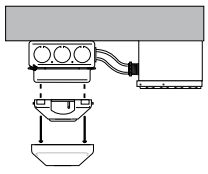
WIREMOLD V5738 FIXTURE BOX



MUD RING WITH 1900 BOX



OFFSET NIPPLE



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